

**Nebraska Information Technology Commission
Community Technology Fund 2002**

Application Form

Project Title: Franklin County Memorial Hospital Electronic Archiving of Medical Records

Submitting Entity: Franklin County Memorial Hospital

Grant Amount Requested: \$22,292

Project Contact Information:

Jerrell F. Gerdes, Chief Executive Officer
1406 Q. Street PO Box 315
Franklin, Nebraska 68939
308-425-6221
308-425-3164 Fax
jcgerdes@hotmail.com

Executive Summary:

This project will address an identified need for our hospital and the certified Rural Health Clinics we operate. Medical record storage is now in paper form, the hospital records and the four rural health clinics records are separately stored in file cabinets, some over twenty five miles away from the hospital. Technology exists that will integrate these medical records into an electronic form, accessible through encrypted Internet services to qualified practitioners.

This project will improve patient outcomes as the attending practitioner will be able to view any patients record from any of the five sites operated by the hospital. Additionally, we utilize locum tenens physicians in our emergency room, this project will improve accessibility to medical histories and medications via the hospital computer. Technology will involve a computers, scanners, software, and a protected network. Administrative personnel will scan in current records, providing daily updating when patients present for medical services. By automating the process, accessibility will be available at any hour of the day from five separate locations. A project that will result in improved medical care and also improve secure storage of the medical records.

Goals, Objectives and Outcomes

The Franklin County Memorial Hospital established in its Strategic Planning meeting, attended by Medical Staff, Governing Board, and Departmental Supervisors, that a continual problem exists when patients present to a clinic or the emergency room of the hospital and their current medical records are not accessible. This problem is enhanced five fold as the hospital operates certified rural health clinics in Franklin, Hildreth, Campbell (Franklin County) and Red Cloud (Webster County), patients present routinely at any or all these clinics as well as the hospital. Seven practitioners treat the patients in multiple locations, making access a major problem.

Goals:

1. Expansion of the local area network in the hospital and FCMH Pool Medical Clinic.
2. Implementation of the Internet access for Hildreth, Campbell and Red Cloud.
3. Installation of scanner equipment at all five locations.
4. Improve quality of care through improved access to records.
5. Increase provider production and satisfaction.

Project objectives will be as follows:

1. Order the DataStore COLD software with five concurrent users and PaperStore (Imaging Software).
2. Order four Fujitsu ScanPartner 15c with software for the clinics and a Fujitsu Scanner 93GX with software for the hospital.
3. Order a NT Server with 150 Gg. Hard drive and a Workstation.
4. Upgrade the hospital network to manage the data, IBM RSC6000 now in service.
5. Upgrade the computers in the clinic to serve the remote scanners with Internet service.
6. Complete installation and training for the system operators.

Expected outcomes will be as follows:

1. For the short term, paper records will still be utilized in the hospital and clinics, but storage will be electronic for all records over one year old. This will reduce the burden for secure storage areas and with tape backup create back-up files for all records.
2. Hospital professionals and Medical Staff members will become proficient in accessing electronic data, providing necessary information at the bedside regardless of the time of day or day of the week.
3. Patient outcomes should improve, as duplication will be minimized in testing and treatment. Adverse outcomes should be averted as practitioners have accurate patient information before medical intervention recommendations are determined.
4. The impact on the 5,000 patients in our practices will be significant and the geographical impact will extend into Webster county.

Project Justification

Franklin County Memorial Hospital will address community needs through an innovative implementation of a electronic storage system which will result in improved health care delivery, more security of confidential information, and directly benefit our patients.

Information is so vital in healthcare, knowing about allergies, present medications, medical histories, and diagnostic studies contribute to economic, quality care. The electronic storage is a key to providing information access at multiple locations, grant funds are vital to making this project a reality.

Franklin County Memorial Hospital is a certified Critical Access Hospital, dependent on local property tax and serving a population that includes a high incidence of elderly and poverty challenged individuals. The hospital has served this community for 50 years, contributing charity care during all of these years.

Determination of a dollar value or time savings for the project is rather intangible. It is the right thing to do, but is most difficult to measure value. If just one patient does not receive extra diagnostic testing or medications, the project is justified. In an emergency, perhaps a life is saved through knowledge of the medical history. What is the value of a life? Granted, we are treating patients now and we utilize many options to avoid an error-but electronic access is far superior to our present practice.

Technical Impact

The project will supplement and upgrade our present network. The system is a RSC6000 server with ten PC's connected to the network. Only the clinic in Franklin is connected to the existing network, although each of the three other clinics have computers and access to the Internet.

Specific hardware required will be:

Three.....Fujitsu ScanPartner 15C with software (Campbell, Hildreth, Red Cloud)

Two.....Fujitsu Scanner 93GX with software. (Franklin)

These scanners are very reliable, cost appropriate and suitable to manage 8 1/2" X 11" paper on a flatbed.

Two Ultra Computers, Pentium 4, 450 Mhz, 254 Mb and 20 Gg hard drive. (Campbell and Hildreth).

One Ultra Computer, Pentium 4, Server with 150 Gg hard drive and Zip-Drive. (Hospital)

One Ultra Computer, Pentium 4 as a Scan Station, Pentium 4, 450 Mhz.

Generic PC's are quite economical and supported by a local technician, an important consideration when you are rural. All of the computers will be Pentium 4, with the RAM bumped up, and at least 20 but perhaps 40 gigs of hard drive. Internal modems will utilize 56k for transmission although the Franklin hospital and clinic are using a T-1 for access to the Internet. The Server will be on the T-1 line.

Specific Software will be Windows XP operating with the DataStore (COLD) and PaperStore (Imaging Software), allowing for five concurrent users. The Hitec Laboratories developed the Hitec DataStore COLD system. In addition to the software's computer output to laser disk (COLD), features in the system include enhanced capabilities for the electronic distribution of reports, on-line search and retrieval of specific data elements, automated archive management and electronic forms overlay. The system automatically downloads reports from the Unix mainframe, compresses data at the rate of 30 to 2, indexes pages and files them away in the correct electronic file cabinets.

Preliminary Plan for Implementation

The project sponsor in this project the Franklin County Memorial Hospital, stakeholders include the hospital as well as the rural health clinics in Campbell, Hildreth, Franklin and Red Cloud. We have been evaluating the needs for the past two years, utilizing Strategic Planning and outside consultants to reach our plan. The project is supported by the Medical Staff, Board of Trustees, and Department Supervisors.

The project sponsor will be funding the implementation beyond the grant funding, also seeking additional grants and donations to complete the project. The system scalability will allow for electronic records and hand held systems for the clinics, certainly a goal for the long term.

The project team will consist of:

Project Leader: Jerrell Gerdes BS MHA- will oversee implementation of the project.

Clinical Team: Dr. James Connor MD PhD, Kathy L. Murphy APRN MSN-will Recommend initial set-up, support implementation, and assist in policy development.

Admin. Team: Cathy Webber, Health Information Manager-will be responsible for coordinating conversion into the new system via scanning, input, or as determined by the clinical team, as well as archiving records. Linda Bush, Chief Operating Officer-will be responsible for coordination of hardware and software installation and compatability registration procedures, and training of clerical staff.

IT Team: Gaylen Lambert, Computer Solutions and Dick Kieffe, ISSolutions Inc. Will be responsible for installation, configuration, and on-going maintenance of hardware and software. This should be a turnkey installation.

Facilities: Randall Stover, Director of Plant Services- will be responsible for all necessary electrical needs, moving of equipment, cabling, and the archiving of old records.

Timeline and Milestones

May 2002

- Final selection of hardware and software vendor
- Evaluation of existing system with selected vendor
- Initial instruction for users of the new system

June 2002

- Receipt of Grant funding
- Project meeting and task assignments
- Purchase order for hardware selected.

July 2002

- Delivery of hardware to software vendor for configuration/installation.
- Activation of Internet in Hildreth and Campbell clinics.
- System testing at each remote location and the hospital.
- Correction of any unforeseen problems in implementation

August 2002

- Scanning of initial documents for past three months begins
- Daily scanning of clinic records implemented
- Discharge scanning for hospital records implemented

September 2002

- Scanning continues to create a one year historical record
- Activation of the network (Internet) service

October 2002

- Full implementation of the network system.
- Archiving continues for old paper

This project will be sustained through the hospital, supported by a capital equipment plan that will continually enhance the speed and access of the computer network. The software is also likely to be upgraded to meet the advances in computer technology.

Key personnel at the hospital have a 10 to 25 year tenure, no expectations for turnover in this group. However, we have continually trained individuals to perform dual functions and prevent interruptions in our service.

The measure and assessment plan will involve the following:

1. Archived records from all five locations are available for past 12 months, on or before January of 2003. Measurement will be simple audit tool and comparative to current data.
2. Electronic access to the medical records is utilized by practitioners. Measurement will be simple report from computer noting utilization and access (password) entry.
3. Practitioners will be polled to determine if the information is timely, accessible, and of value to their medical practice plan. Measurement will be a checklist audit summary that will note access, time and date, and input from practitioner on the value of immediate access to current records.

The grant awards 10 points to the evaluation plan, I am concerned that the above three criteria will not be sufficient for grant reviewers. However, the outcome of this grant is very straight-forward and few variances should exist. The most simplest measurements will reflect access, archived information, and encryption of the data. The intangible value result from the success of patient care improvement and continuity.

Financial Analysis and Budget

	CTF Grant	Cash Match	In-Kind	Total
Personnel Costs (1)			\$50,580	\$50,580
Contractual Services (2)				
Capital Expenditures (3)	\$22,292	\$18,703		\$40,995
Supplies and Materials		\$1,425		\$1,425
Telecommunications		\$1,600		\$1,600
Training		\$5,000	\$6,250	\$11,250
Travel		\$2,645		\$2,645
Supplies and Materials		\$2,965		\$2,965
Other Costs				
Total	\$22,292	\$29,630	\$56,830	\$111,460

Match Percent = 77%

1)

Project Team	# of Hours	Weeks	Total Hours
Project Leader	20	20	400
Clinical Team	10	20	200
Adm. Team	25	30	750
Medical Records Clerk	30	40	1,200
Facilities Staff	15	10	150

3)

Pentium NT Server	\$3,400
150 gig HD Tape Backup	
Pentium PC's (3)	\$3,900
20 gig HD Modem	
Fujitsu Scanner 93GX (2)	\$6,780
Fujitsu Scanner 15C (3)	\$4,170

Software

DataStore (COLD) 5 concurrent users	\$13,500
PaperStore Imaging Software 5 concurrent users	\$7,995
Windows XP Professional (5)	\$1,250

Financial Narrative: The budget reflects supplies and materials such as tape drives, tapes, paper shredders to destroy archived files.